

REMARKS

The Office Action mailed August 28, 2003 has been carefully reviewed and the following remarks are made in consequence thereof.

Claims 1-20 are pending in this application. Claims 1-20 stand rejected.

The rejection of Claims 1-13 under 35 U.S.C. § 101 as being directed to non-statutory subject matter is respectfully traversed.

Applicant respectfully submits that the claims of the present patent application are directed to practical applications in the technological arts. “Any sequence of operational steps can constitute a process within the meaning of the Patent Act so long as it is part of the technological arts.” In re Musgrave, 431 F.2d 882 (C.C.P.A. 1970). For example, independent Claim 1 is a method directed to “creating a two-dimensional representation of a revolved three-dimensional solid”. Applicant submits that creating a two-dimensional representation of a revolved three-dimensional solid is a useful process that should be considered to be within “the technological arts”.

One specific example of such a method implementation is an apparatus for generating a two-dimensional representation of a three-dimensional solid, said apparatus with a processor programmed to generate a single equivalent profile curve for each revolved face in a two-dimensional plane. The computer, for example, may be further programmed to generate the two-dimensional representation without generating intersection lines within the three-dimensional solid. While the claims are not limited to the specific examples related to a computer with a programmed processor, the claims need not be so restricted to satisfy the requirement of Section 101.

Applicant further traverses the assertion included in the Office Action that Claims 1-13 are directed to non-statutory subject matter under Section 101. More specifically, Applicant respectfully traverses the suggestion included in the Office Action that Claims 1-13 are non-statutory because “the claims are directed towards manipulation of an abstract idea (creating geometric models), without producing “useful, concrete, and tangible” results as required by *In re Alappat*.” The Examination Guidelines for Computer-Related Inventions provides in relevant part as follows:

In order to determine whether the claim is limited to a practical application of an abstract idea, Office personnel must analyze the claim as a whole, in light of the specification, to understand what subject matter is being manipulated and how it is being manipulated. During this procedure, Office personnel must evaluate any statements of intended use or field of use, any data gathering step and any post-manipulation activity....Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under § 101. Further, when such a rejection is made, Office personnel must expressly state how the language of the claims has been interpreted to support the rejection.

Applicant respectfully submits that Claims 1 and 7 are limited to a practical application in the technological arts. Furthermore, Applicant respectfully submits that the Office Action does not expressly state how the language of Claims 1 and 7 supports the Section 101 rejection.

Claim 1 recites a method for creating a two-dimensional representation of a revolved three-dimensional solid wherein the method includes “selecting the three-dimensional solid for which the associative two-dimensional section is to be generated...generating a single equivalent profile curve for each revolved face of the three-dimensional solid in a two-dimensional plane.” Thus, Applicant submits that Claim 1 is directed to a useful process that is considered to be within “the technological arts”. Furthermore, Claim 1 describes “creating a two-dimensional representation of a revolved three-dimensional solid.” Thus, Claim 1 includes a tangible result from a series of steps of a process. Claim 1 is therefore directed to a practical application in the technological arts.

Dependent Claims 2-6 depend from independent Claim 1, and these dependent Claims are submitted to satisfy the requirements of Section 101 for the same reasons set forth above with respect to independent Claim 1.

Claim 7 recites an apparatus for generating a two-dimensional representation of a three-dimensional solid wherein the apparatus comprises “a processor programmed to generate a single equivalent profile curve for each revolved face in a two-dimensional plane.” Thus, Applicant submits that Claim 7 is directed to an apparatus that includes a processor

programmed to perform a useful process that is considered to be within "the technological arts". Furthermore, Claim 7 describes "generating a two-dimensional representation of a three-dimensional solid." Thus, Claim 7 includes a tangible result from a series of steps of a process performed by a processor. Claim 7 is therefore directed to a practical application in the technological arts.

Claims 8-13 depend from independent Claim 7, and these dependent Claims are submitted to satisfy the requirements of Section 101 for the same reasons set forth above with respect to independent Claim 7.

For at least the reasons set forth above, Applicant respectfully requests that the Section 101 rejection of Claims 1-13 be withdrawn.

The rejection of Claims 14-20 under 35U.S.C. §112, first paragraph, is respectfully traversed. Applicant respectfully submits that one of ordinary skill in the art, after reading the specification in view of the Figures, would agree that the subject matter in the specification is described in such a manner as to reasonably convey that the Applicant had possession of the claimed invention, at the time the application was filed. Furthermore, Applicant submits that the specification as originally filed, does adequately describe a server system configured to be coupled to a client system and a data storage device wherein the server system is further configured to generate a single equivalent curve for each revolved face of a three-dimensional solid in a two-dimensional plane. More specifically, Applicant submits that one skilled in the art, after reading the specification in light of the Figures would understand that a server system configured to be coupled to a client system may operate in a client-server environment that is not limited to the definition provided in the Office Action, but rather a server system may provide significantly greater resources than recited in the Office Action. Furthermore, Applicant submits that a definition for "server" may not necessarily apply to a "server system" as claimed in the present specification. Similarly, applicant submits that a definition of "configuration" may have little or nothing to do with a definition of "configured to" as recited in the claims of the instant specification. A computer that is "configured to" perform a step of a process may be very much part of the entire interconnected set of hardware. As such, Applicant respectfully submits that using definitions of words other than those used in the claims has lead to a misunderstanding of what is claimed.

In addition, Applicant respectfully submits that the Section 112 rejections of Claims 14-20 is improper, as no express findings of fact which support the lack of written description conclusion have been presented to Applicant. MPEP 2163.04. Applicant submits that one of ordinary skill in the art would understand that a system for creating a two-dimensional representation of a three-dimensional solid, including a client system having a browser, a data storage device for storing information relevant to a plurality of users, and a server system configured to be coupled to the client system and the data storage device may be configured such that the server system may generate a single equivalent curve for each revolved face of the three-dimensional solid in a two-dimensional plane. Moreover, "resolution of any ambiguity may be aided by extrinsic evidence of usage and meaning of a term in the context of the invention" such that the determining factor regarding the meaning of a term, is "how the phrase would be understood by persons experienced in the field...upon reading the patent documents." As such, Applicant respectfully submits that an artisan of ordinary skill in the art would recognize that the server system may be configured to not only run administrative software that controls access to the network and its resources. Accordingly, Applicant submits that Claim 14 meets the requirements of Section 112, first paragraph.

Claims 15-20 depend from independent Claim 14, and these dependent Claims are submitted to satisfy the requirements of Section 112 for the same reasons set forth above with respect to independent Claim 14.

For at least the reasons set forth above, Applicant respectfully requests that the Section 112, first paragraph, rejection of Claims 14-20 be withdrawn.

The rejection of Claims 14-20 under 35U.S.C. §112, first paragraph, is respectfully traversed.

Applicant respectfully submits that the specification satisfies the requirements of Section 112, first paragraph. More specifically, Applicant respectfully submits that the disclosure, including the Figures, would enable one skilled in the art to make and/or use the invention with only a modicum of study. The Federal Circuit has opined in Verve LLC v. Crane Cams, Inc., 65 USPQ 2d 1051, 1053-1054 (Fed. Cir. 2002), that "[p]atent documents are written for persons familiar with the relevant field; the patentee is not required to include in the specification information readily understood by practitioners, lest every patent be written as a comprehensive tutorial and treatise for the generalist, instead of a concise

statement for persons in the field." Furthermore, Applicant submits that the specification as originally filed, adequately describes a server system configured to be coupled to a client system and a data storage device wherein the server system is further configured to generate a single equivalent curve for each revolved face of a three-dimensional solid in a two-dimensional plane. More specifically, Applicant submits that one skilled in the art, after reading the specification in light of the Figures would understand that a server system configured to be coupled to a client system may operate in a in a client-server environment that is not limited to the definition provided in the Office Action, but rather a server system may provide significantly greater resources than recited in the Office Action. Furthermore, Applicant submits that a definition for "server" may not necessarily apply to a "server system" as claimed in the present specification. Similarly, applicant submits that a definition of "configuration" may have little or nothing to do with a definition of "configured to" as recited in the claims of the instant specification. A computer that is "configured to" perform a step of a process may be very much part of the entire interconnected set of hardware. As such, Applicant respectfully submits that using definitions of words other than those used in the claims has lead to a misunderstanding of what is claimed.

In addition, Applicant respectfully submits that the Section 112 rejections of Claims 14-20 is improper, as no express findings of fact which support the lack of written description conclusion have been presented to Applicant. MPEP 2163.04. Applicant submits that one of ordinary skill in the art would understand that a system for creating a two-dimensional representation of a three-dimensional solid, including a client system having a browser, a data storage device for storing information relevant to a plurality of users, and a server system configured to be coupled to the client system and the data storage device may be configured such that the server system may generate a single equivalent curve for each revolved face of the three-dimensional solid in a two-dimensional plane. Moreover, "resolution of any ambiguity may be aided by extrinsic evidence of usage and meaning of a term in the context of the invention" such that the determining factor regarding the meaning of a term, is "how the phrase would be understood by persons experienced in the field...upon reading the patent documents." As such, Applicant respectfully submits that an artisan of ordinary skill in the art would recognize that the server system may be configured to not only run administrative software that controls access to the network and its resources. Accordingly, Applicant submits that Claim 14 meets the requirements of section 112, first paragraph.

Claims 15-20 depend from independent Claim 14, and these dependent Claims are submitted to satisfy the requirements of Section 112 for the same reasons set forth above with respect to independent Claim 14.

For at least the reasons set forth above, Applicant respectfully requests that the Section 112, first paragraph, rejection of Claims 14-20 be withdrawn.

The rejection of Claims 14-20 under 35U.S.C. §112, second paragraph, is respectfully traversed.

Applicant respectfully submits that Claims 14-20 satisfy section 112, second paragraph. More specifically, Applicant respectfully submits that Claims 14-20 are definite and particularly point out and distinctly claim the subject matter of the invention.

Applicant submits that the specification as originally filed, adequately describes a server system configured to be coupled to a client system and a data storage device wherein the server system is further configured to generate a single equivalent curve for each revolved face of a three-dimensional solid in a two-dimensional plane. More specifically, Applicant submits that one skilled in the art, after reading the specification in light of the Figures would understand that a server system configured to be coupled to a client system may operate in a client-server environment that is not limited to the definition provided in the Office Action, but rather a server system may provide significantly greater resources than recited in the Office Action. Furthermore, Applicant submits that a definition for “server” may not necessarily apply to a “server system” as claimed in the present specification. Similarly, applicant submits that a definition of “configuration” may have little or nothing to do with a definition of “configured to” as recited in the claims of the instant specification. A computer that is “configured to” perform a step of a process may be very much part of the entire interconnected set of hardware. As such, Applicant respectfully submits that using definitions of words other than those used in the claims has lead to a misunderstanding of what is claimed.

Applicant submits that one of ordinary skill in the art would understand that a system for creating a two-dimensional representation of a three-dimensional solid, including a client system having a browser, a data storage device for storing information relevant to a plurality of users, and a server system configured to be coupled to the client system and the data storage device may be configured such that the server system may generate a single

equivalent curve for each revolved face of the three-dimensional solid in a two-dimensional plane. Moreover, “resolution of any ambiguity may be aided by extrinsic evidence of usage and meaning of a term in the context of the invention” such that the determining factor regarding the meaning of a term, is “how the phrase would be understood by persons experienced in the field...upon reading the patent documents.” As such, Applicant respectfully submits that an artisan of ordinary skill in the art would recognize that the server system may be configured to not only run administrative software that controls access to the network and its resources. It is therefore submitted that Claims 14-20 clearly and distinctly claim the subject matter of the present invention. Accordingly, Applicant respectfully requests that the rejection of Claim 14 under Section 112, second paragraph be withdrawn.

Claims 15-20 depend from independent claim 14. When the recitations of claims 15-20 are considered with the recitations of claim 14, Applicant respectfully submits that claims 15-20 also meet the requirements of Section 112, second paragraph.

For at least the reasons set forth above, Applicant respectfully requests that the Section 112, second paragraph, rejection of Claims 14-20 be withdrawn.

Applicant respectfully traverses the assertion in the Office Action that Claims 14-20 are “so indefinite that no prior art examination is feasible.” For example, the Section 112 rejections of Claims 14-20 rely on definitions of the words “server” and “configuration” but, the words used in the claims are “server system” and “configured to”, respectively. The reliance on the definitions of words not used in the Claims has lead to an apparent misunderstanding of the Claims. Applicant submits that one of ordinary skill in the art would understand that a system for creating a two-dimensional representation of a three-dimensional solid, including a client system having a browser, a data storage device for storing information relevant to a plurality of users, and a server system configured to be coupled to the client system and the data storage device may be configured such that the server system may generate a single equivalent curve for each revolved face of the three-dimensional solid in a two-dimensional plane, and is not limited to the definitions cited in the Office Action for words that do not appear in the claims of the instant application. Accordingly, Applicant submits that Claims 14-20 are not so indefinite that it would require reliance on a speculative assumption as to the meaning of the claims for examination against the prior art. Therefore Applicant requests an examination of claims 14-20 based on the specification and further in

light of the figures and the opportunity to respond to a rejection based on newly cited prior art.

The rejection of Claims 1-13 under 35 U.S.C. §102 as being anticipated by Solid Edge is respectfully traversed.

Solid Edge describes a computer-aided design (CAD) system for mechanical assembly, part modeling, and drawing production that captures solid model design intentions through inference logic and decision-making concepts.

Claim 1 recites a method for creating a two-dimensional representation of a revolved three-dimensional solid wherein the method includes “selecting the three-dimensional solid for which the associative two-dimensional section is to be generated...generating a single equivalent profile curve for each revolved face of the three-dimensional solid in a two-dimensional plane.”

Solid Edge does not describe nor suggest a method for creating a two-dimensional representation of a revolved three-dimensional solid wherein the method includes “selecting the three-dimensional solid for which the associative two-dimensional section is to be generated and generating a single equivalent profile curve for each revolved face of the three-dimensional solid in a two-dimensional plane. Rather in contrast to the present invention, Solid Edge describes adding a revolved protrusion or cutout to a model but does not describe nor suggest selecting the three-dimensional solid for which the associative two-dimensional section is to be generated, in that, Solid Edge does not describe generating an associative two-dimensional section. Moreover, Solid Edge does not describe nor suggest generating a single equivalent profile curve for each revolved face of the three-dimensional solid in a two-dimensional plane. More specifically, Solid Edge does not describe nor suggest generating a single equivalent profile curve. Rather in contrast to the present invention, Solid Edge describes drawing the profile of a revolved protrusion or cutout, defining an axis of revolution about which the profile will be revolved, and specifying the number of degrees the feature will be revolved to generate the revolved protrusion or cutout. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Solid Edge

Claims 2-6 depend, directly or indirectly, from independent Claim 1. When the recitations of Claims 2-6 are considered in combination with the recitations of Claim 1, Applicant submits that Claims 2-6 are likewise patentable over Solid Edge

Claim 7 recites an apparatus for generating a two-dimensional representation of a three-dimensional solid wherein the apparatus includes a processor programmed to generate a single equivalent profile curve for each revolved face in a two-dimensional plane.”

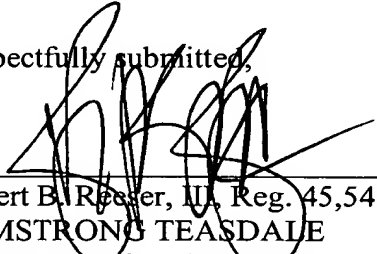
Solid Edge do not describe nor suggest an apparatus for generating a two-dimensional representation of a three-dimensional solid wherein the apparatus includes a processor programmed to generate a single equivalent profile curve for each revolved face in a two-dimensional plane. Rather in contrast to the present invention, Solid Edge describes drawing the profile of a revolved protrusion or cutout, defining an axis of revolution about which the profile will be revolved, and specifying the number of degrees the feature will be revolved to generate the revolved protrusion or cutout. Accordingly, for at least the reasons set forth above, Claim 7 is submitted to be patentable over Solid Edge

Claims 8-13 depend, directly or indirectly, from independent Claim 7. When the recitations of Claims 8-13 are considered in combination with the recitations of Claim 7, Applicant submits that Claims 8-13 are likewise patentable over Solid Edge

Accordingly, for the reasons set forth above, Applicant requests that the Section 102 rejection of Claims 1-13 be withdrawn.

In view of the foregoing remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully submitted,



Robert B. Reaser, III, Reg. 45,548
ARMSTRONG TEASDALE
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070